

SYLLABUS
Math 430: Theory of Numbers
Section 39651
Fall 2023

Lectures: MWF 12:00 – 12:50am, THH 118

Instructor: Spencer Gerhardt

Course Webpage: <https://blackboard.usc.edu/webapps/login/>

Email: sgerhard@usc.edu

Office Location: KAP 406J

Office Hours: MW 2 – 3pm, F 1 – 2 pm, or by appointment

Course Description: (4 units) Introduction to the theory of numbers, including prime factorization, congruences, primitive roots, N-th power residues, number theoretic functions and certain diophantine equations.

Prerequisites: Math 225.

Text: **Elementary Number Theory** (7th Ed.) by David M. Burton.

COURSE LOGISTICS

Our goal is to cover the first nine chapters of the textbook. Throughout the semester our course will make use of the following online systems:

- Blackboard as the main hub for all communication, links, and course materials.
- Gradescope for homework and exams.

Over the the semester, it is possible some students will enter USC health and safety protocols. To best accommodate this eventuality, I will post the lecture notes on Blackboard. Hence you don't need to rush to write everything down in class (unless you like to).

It is also possible due to health and safety protocols (or some other reason) that an individual class lecture may be held remotely via Zoom. If this is the case, I will notify you in advance via Blackboard.

ASSESSMENTS

Homework:

There will be weekly homework assignments posted in Gradescope.

Group Presentations:

There will be one or two group presentations consisting of supplementary material not covered in the course. The structure of the presentations will be discussed in class.

Exams:

There are three exams in the course: two midterms and a final. All exams will be held in person, and the midterms will take place during normally scheduled class times. If you cannot be present, you must contact me **BEFORE** the exam date to make other arrangements.

- **Exam 1:** Friday October 6
- **Exam 2:** Friday November 3
- **Final Exam:** Friday, December 8 2023, 11 –1 am.

GRADING

Your grade in the course is calculated as follows:

- Homework and Presentations: 30%
- Midterms: 40%
- Final Exam: 30%

OTHER POLICIES

Disability Services: Any student requesting accommodations based on a disability is required to register with the Office of Student Accessibility Services (OSAS) each semester. A letter of verification for approved accommodations can be obtained from OSAS. Please be sure the letter is delivered to me as early in the semester as possible.

<https://osas.usc.edu/>

213-740-0776 (phone)

213-740-6948 (TDD only)

213-740-8216 (fax)

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